Owner's Manual

MOON Series

320 S

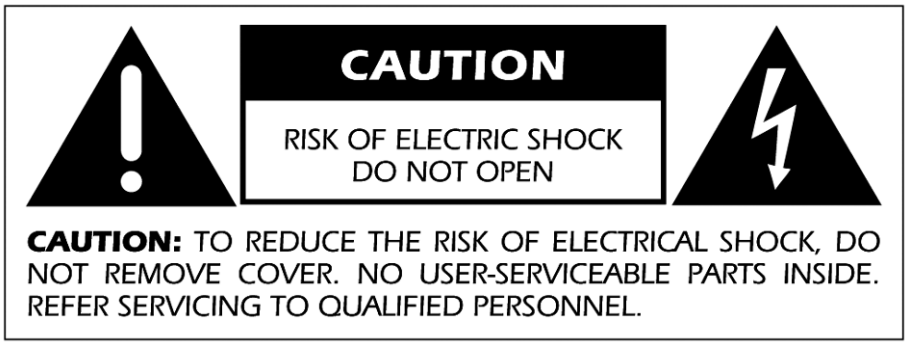
Power Supply

MOON

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or another apparatus that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments and accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No naked flame sources, such as candles, should be placed on the apparatus.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

Important Safety Instructions (cont'd)

The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

Please read all instructions and precautions carefully and completely before operating your Simaudio MOON 320S Power Supply.

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. The MOON 320S must be terminated with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. Connect the MOON 320S only to an AC source of the proper voltage; Both the shipping box and rear panel serial number label will indicate the correct voltage. Use of any other voltage will likely damage the unit and void the warranty.
3. AC extension cords are **NOT** recommended for use with this product.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate the MOON 320S with any covers removed. There are no user-serviceable parts inside. An open unit, especially if it is still connected to an AC source, presents a potentially lethal shock hazard. Refer all questions to authorized service personnel only.
6. **NEVER** wet the inside of the MOON 320S with any liquid. If a liquid substance does enter your MOON 320S, immediately disconnect it from the AC mains and take it to your MOON dealer for a complete check-up.
7. **NEVER** spill or pour liquids directly onto the MOON 320S.
8. **NEVER** block air flow through ventilation slots or heatsinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified.
11. **NEVER** attempt to repair the MOON 320S. If a problem occurs contact your MOON dealer.
12. **NEVER** expose the MOON 320S to extremely high or low temperatures.
13. **NEVER** operate the MOON 320S in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

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Congratulations!

Thank you for selecting the **MOON 320S Power Supply** as a part of your music system. This component has been designed to offer state-of-the-art high-end performance in an elegant package, while retaining all the sonic hallmarks on which Simaudio has made its reputation. We have spared no effort to ensure that it is provides a significant improvement to the sonic performance of your **MOON 310LP Phono Preamplifier**. We have been building high-performance audio equipment for almost 30 years, and the know-how gained through our cumulative experience is an important reason why **MOON** audio components are so musically satisfying.

The performance of your **320S** will continue to improve during the first 200 hours of use. This is the result of a "break-in" period required for the numerous high quality electronic parts used throughout this Power Supply.

IMPORTANT !

Before setting up your new MOON 320S, there are mandatory internal adjustments that must be made to the 310LP Phono Preamplifier! Failure to make the adjustments before connecting it to the 320S may result in damage that is not covered by warranty! Refer to page 7 of this manual for instructions.

We hope you enjoy using the **MOON 320S Power Supply** as much as the pride we have taken in creating this fine audio product. We understand the power and emotion of music and build our products with the goal of faithfully capturing these elusive qualities.

The information contained in this manual is subject to change without notice. The most current version of this manual is available on our official website at http://www.simaudio.com/manuals.htm

Unpacking

The **MOON 320S Power Supply** should be removed from its box with care.

The following accessories should be included inside the box with your Power Supply:

- ✓ *DC 4-pin XLR cable*
- ✓ *This owner's manual*
- ✓ *Warranty and product registration information (USA and Canada only)*

As soon as the Power Supply is safely removed from its box and placed down, perform a thorough physical inspection and report any physical damage to your dealer immediately. We suggest that you keep all of the original packaging, storing it in a safe, dry place in the event that you're required to transport this product. The customized packaging is specially designed to protect the **MOON 320S Power Supply** from potential damage that may occur during shipping.

Please write the serial number of your new Simaudio **MOON 320S** in the space provided below for future reference.

Serial No.: _____

Introduction

Your **MOON 320S Power Supply** incorporates many significant design features to enhance the “world class”performance of your **MOON 310LP Phono Preamplifier**. This is an abbreviated list of the more important features:

High quality **toroidal transformer**.

4 stages of DC voltage regulation.

Total capacitance of **35,200uF.**

Dual choke inductance (2x 200mH).

Special **"pi-type" filter** after initial voltage rectification stage to reduce AC transmission noise.

Dual action voltage regulation system to further lower noise.

DC signal noise is **150dB lower** within 310LP circuitry.

Reduces the 310LP’s signal-to-noise ratio by over 3dB, regardless of its selected internal gain setting.

Pure copper circuit board tracings with extremely low impedance characteristics.

Accurate matching of the finest high quality electronic components.

Designed to be **powered up at all times** for optimal performance.

Low operating temperature for a longer than normal life expectancy.

Installation & Placement

The **MOON 320S** has been designed to be placed side-by-side with the MOON 310LP. Together, these 2 components will fit easily on any standard audio equipment shelving system. As well, feel free to experiment with other placement options for the best possible setup that meets your needs.

310LP Internal Settings

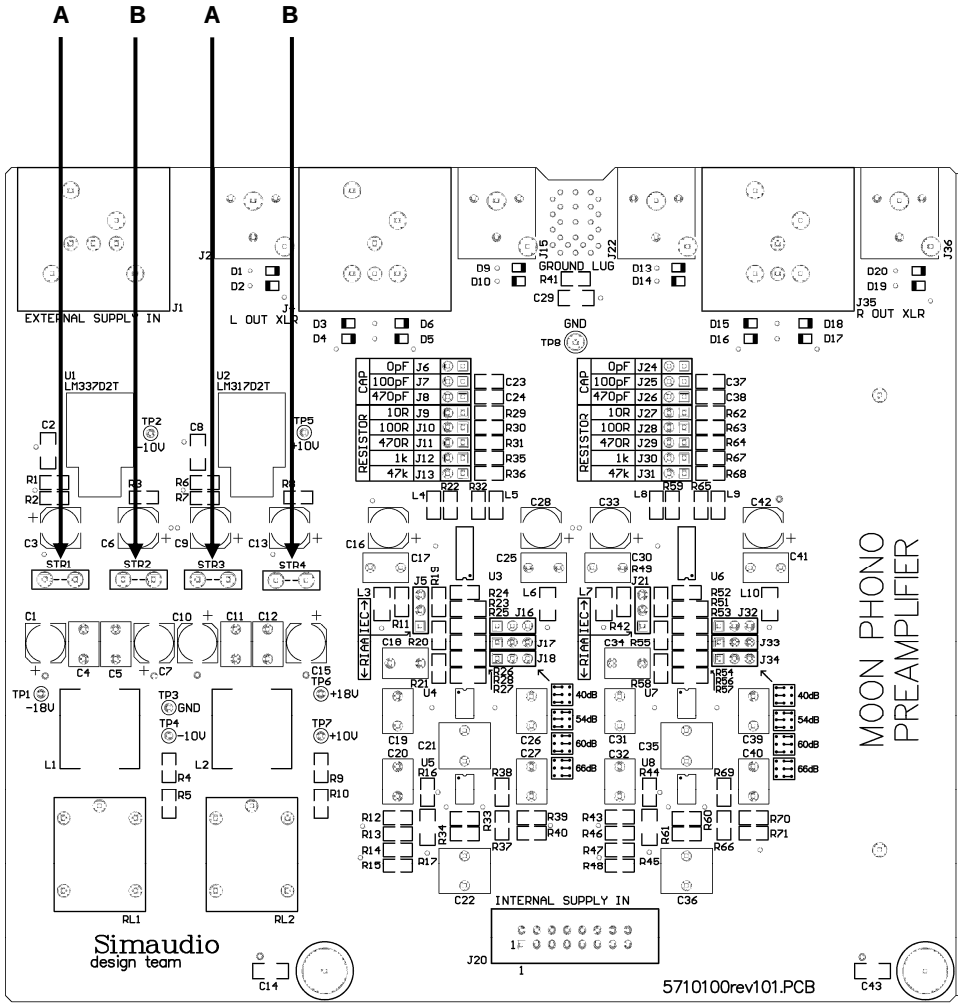

Figure 1: MOON 310LP Circuit Board layout

Prior to connecting your **MOON 310LP Phono Preamplifier** to the **MOON 320S Power Supply**, you **must** move two (2) internal jumpers inside your **MOON 310LP**. Please refer to page 8 of your **MOON 310LP** owner's manual for detailed instructions on how to remove the chassis cover. Referring to the above diagram of the 310LP, you will see an array of four (4) jumper sockets labeled STR1, STR2, STR3 and STR4. The factory default position for the 2 jumpers is in sockets STR2 and STR4 (positions B in figure 1). To properly operate the **MOON 310LP** in conjunction with the **MOON 320S**, you will need to move these 2 jumpers into sockets STR1 and STR3 (positions A in figure 1). Failure to make these adjustments may cause damage that is not covered by warranty.

Rear Panel Connections

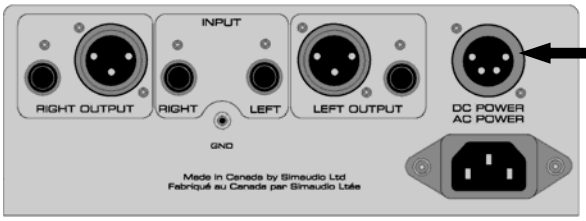

Figure 2: MOON 310LP Rear panel

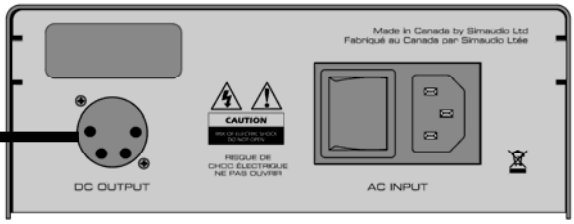

Figure 3: MOON 320S Rear panel

The rear panel of the **MOON 320S** will look similar to Figure 3 (above right). There is a 4-pin female XLR connector, labeled "DC output", located on the left side. On the right side are the the power "main switch" and IEC receptacle, labeled "AC Input".

To connect the **MOON 310LP Phono Preamplifier** to the **MOON 320S Power Supply**, follow these steps:

1. Disconnect the AC power cord from your **MOON 310LP**.

2. Use the supplied DC 4-pin XLR cable to connect the "DC Output" on the **MOON 320S** to the "DC Power" input on the **MOON 310LP**. The male end (with 4 pins) of the cable connects to the **MOON 320S** and the female end (with 4 holes) connects to the **MOON 310LP**. Do not use an aftermarket or custom 4-pin XLR cable as the supplied cable is specifically designed for this application.

3. Connect the **MOON 310LP**'s AC power cable to the IEC receptacle, located on the **320S**'s rear panel. Ensure that the AC wall outlet you use has a functioning ground. For the best sonic performance, it is preferable that you plug your **320S** directly into a dedicated AC outlet and avoid using an extension cord. If you have the time and willingness, consider installing a superior quality AC wall outlet such as a hospital grade Hubbell.

4. In order to obtain the maximum performance from your audio system, we strongly recommend that the detachable power cord not come into physical contact with any of the interconnect cables from your audio system. In the event that this can't be avoided, you should ensure that any cables coming into contact with each other are crossed at ninety degree angle to minimize the contact area.

Operating the 320S

Since your **MOON 310LP Phono Preamplifier** is not equipped with its own on/off power switch, powering it on and off is accomplished via the **MOON 320S Power Supply's** on/off switch, located on the rear panel.

We recommend that you leave your **MOON 320S Power Supply** powered up at all times to maintain optimal sonic performance. In the event that you plan to be away from your home for a few days, powering off the **MOON 320S** may not be a bad idea. Once fully "broken-in", please keep in mind that both your **MOON 320S** and **MOON 310LP** will require several hours of playing time before they reach peak performance again.

Powering up your MOON 320S for the first time

Prior to making the AC connection for the first time, make sure that every cable is properly connected to avoid any problems. Once the **320S** is connected to an AC source you may power it up by flicking the main rocker switch labeled "POWER" to the '1' (on) position. The blue LEDs on the front panel of both the **MOON 320S** and **MOON 310LP** will illuminate at the same time.

On and Off Sequence

To avoid having any annoying noises (ie. "thumps" and "pops") emanate from your speakers when powering your **320S** on or off, you should

1) Always power up your **320S** before powering up your preamplifier and/or integrated amplifier**.**

2) Always power down your **320S** after powering down your preamplifier and/or integrated amplifier.

When you power down the **MOON 320S**, the blue LEDs on both units will remain illuminated for up to 10 seconds; this is normal and is the result of the large amount of storage capacitance found in the **MOON 320S Power Supply**.

Specifications

MOON 320S:

Transformer	25VA
Total Capacitance	35,200µF
Total Inductance	400mH
Power Consumption	9 Watts
AC Power Requirements	120V or 240V, 60Hz or 50Hz
Shipping Weight	8 lbs / 3.5 Kgs
Dimensions (W x H x D, inches)	8 x 3.25 x 11

MOON 310LP:

Signal-to-Noise Ratio (full scale @ 40dB gain)	114dBr
Signal-to-Noise Ratio (full scale @ 66dB gain)	92dBr

Note: All other MOON 310LP specifications remain unchanged when using it in conjunction with the MOON 320S.

Fuse Replacement: For the 120V version use a 0.2A slow blow (5 x 20mm size).
For the 230V version use a 0.1A slow blow (5 x 20mm size).